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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,014	05/10/2001	Peter Schafer	A34196 PCT USA-A	5113

7590 12/01/2003

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EXAMINER	
BURCH, MELODY M	

ART UNIT	PAPER NUMBER
3683	

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/853,014	SCHAFER ET AL.	
	Examiner	Art Unit	
	Melody M. Burch	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/14/03 has been entered.

Claim Objections

2. Claims 17-24 are objected to because of the following informalities:

- Examiner recommends making a clear distinction between the "control signal" in line 5 of claim 12, "signals representing a vehicle operator's use of at least one vehicle control" in line 2 of claim 17, and "said vehicle control signals" in lines 3-4 of claim 17 to avoid possible confusion. A similar issue holds true for claims 20 and 22;
- In lines 1-2 of claim 23 "said vehicle control" should be changed to --said at least one vehicle control--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent; except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5 and 12-17 rejected under 35 U.S.C. 102(e2) as being anticipated by US Patent 6149248 to Lubbers et al.

Re: claims 1-4. Lubbers et al. disclose a method for controlling a brake system of a vehicle wherein braking effect on the vehicle wheels is a function of brake pedal force exerted by the operator as shown in figure 5, the braking effect being enhanced by an adjustable braking force booster as shown in figure 5, the method comprising: detecting dynamics of vehicle movement or detecting vehicle deceleration by way of an accelerometer or wheel speed sensor as disclosed in col. 9 lines 51-53, analyzing the dynamics or the deceleration to detect a condition of vehicle instability, particularly, whether the deceleration rate is too low as disclosed in col. 10 lines 10-11, and increasing a force boosting effect of the braking force booster when the analysis indicates vehicle instability as disclosed in col. 10 lines 10-15.

Re: claims 5 and 17. Lubbers et al. describe the step of monitoring via measured pedal force to detect a condition wherein the operator may apply full braking and

increasing the force boosting effect of the braking force booster when the monitoring indicates a condition wherein the operator may apply full braking as disclosed in col. 10 lines 33-36 and as shown in figure 5.

Re: claims 12-16. Lubbers et al. show in figures 1 and 5 a braking system for a vehicle comprising: a brake pedal 4 for operation by a vehicle operator for applying braking force, a braking force booster 10 for increasing the braking force, the booster providing a first normal braking force F pedal shown in figure 1 as a function of force applied to the brake pedal when the deceleration is not too low as inferred by the disclosure in col. 10 lines 10-11 and in col. 10 lines 10-15 and being responsive to a supplied control signal 212 shown in figure 5 to change the normal braking force as a function of (the deceleration DECEL which is a function of) force applied to the brake pedal, and a processor 238 responsive to supplied signals DECEL representing dynamics of vehicle movement, the processor being programmed to analyze the dynamics and provide the control signal to the booster to cause the booster to change braking force when the dynamics indicate vehicle instability.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 6, 7, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubbers et al. in view of US Patent 4146108 to Sato.

Lubbers et al. teach monitoring the operator's use of a pedal, as set forth above, but do not disclose the limitation of the pedal being an accelerator.

Sato teaches the use of a braking system involving the step of monitoring the operator's use of or more specifically the abrupt release of an accelerator pedal as disclosed in lines 1-2 of the abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of controlling the brake system of Lubbers et al. to have included a step of monitoring the operator's abrupt release of the accelerator pedal, as taught by Sato, in order to provide an alternate means of determining the operator's intentions of applying brakes.

7. Claims 8, 9, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubbers et al. in view of US Patent 4658939 to Kircher et al.

Re: claims 8, 20, and 21. Lubbers et al. disclose a method for controlling a brake system of a vehicle wherein braking effect on the vehicle wheels is a function of brake pedal force exerted by the operator as shown in figure 5, the braking effect being enhanced by an adjustable braking force booster as shown in figure 5, the method comprising: detecting dynamics of the vehicle movement or detecting vehicle deceleration by way of an accelerometer or wheel speed sensor as disclosed in col. 9 lines 51-53, analyzing the dynamics or the deceleration to detect a condition of vehicle instability, particularly, whether the deceleration rate is too low as disclosed in col. 10 lines 10-11, and in response to the detection of vehicle instability operating the brake

system to effect a braking condition, but do not specifically disclose the limitation of at least one clamping device responsive to an actuator for applying the braking force to the vehicle.

Kircher et al. teach in figure 1 the use of at least one clamping device or disc brake 1-4 responsive to an actuator M which as taught in col. 4 lines 20-23 presses the brake shoes of the disc brake from either side against a brake disc rotating on a wheel. It is maintained that such pressing action inherently overcomes free play of the clamping device or disc brake. Also, although not disclosed, it is obvious that in order for the method of controlling the braking system of Lubbers et al. to function, there must be an associated well-known brake structure such as a disc brake or drum brake associated with the system. Despite the silence of the inventors of the Lubbers et al. reference with respect to the specific brake structure associated with the system, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake structure associated with the brake system of Lubbers et al., to have included a clamping device or disc brake responsive to an actuator, as taught by Kircher et al., in order to provide a means of realizing the braking effect of the brake system.

Re: claim 9 and 22. Lubbers et al., as modified, describe the step of monitoring via measured pedal force to detect a condition wherein the operator may apply full braking and increasing the force boosting effect of the braking force booster when the monitoring indicates a condition wherein the operator may apply full braking as disclosed in col. 10 lines 33-36 and as shown in figure 5 of Lubbers et al.

8. Claims 10, 11, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubbers et al. in view of Kircher et al., and further in view of Sato.

Lubbers et al., as modified, teach monitoring the operator's use of a pedal, as set forth above, but do not disclose the limitation of the pedal being an accelerator.

Sato teaches the use of monitoring the operator's use of or more specifically the abrupt release of an accelerator pedal as disclosed in lines 1-2 of the abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of controlling the brake system of Lubbers et al., as modified, to have included a step of monitoring the operator's abrupt release of the accelerator pedal, as taught by Sato, in order to provide an alternate means of determining the operator's intentions of applying brakes under unstable vehicle conditions.

Response to Arguments

9. Applicant's arguments filed 11/14/03 have been fully considered but they are not persuasive. Applicant argues that the term "vehicle instability" must be interpreted as defined in the specification of the present invention and further argues that vehicle instability is defined in paragraph [0011] of the instant application. Examiner notes that in paragraph [0011] of the instant application Applicants describe the detection of "an unstable vehicle condition, for example, a risk of swerving or skidding of the vehicle". Examiner further notes that a risk of swerving or skidding of the vehicle is merely an example of an unstable vehicle condition as clearly set forth by Applicant. Paragraph [0011] does not limit unstable vehicle conditions to only a risk of swerving or skidding.

Examiner points out that paragraph [0025] of the instant application also discusses the determination of an unstable condition mentioning in lines 4-6 of paragraph [0025] that "an exact description of the determination of an unstable condition respecting the dynamics of vehicle movement in conjunction with vehicle movement dynamics control is disclosed in Audi's self-study program 204 "Electronic Stability Program." On pg. 9 of the Audi "Electronic Stability Programme Design and Function" reference submitted on 8/22/03 the determination of an unstable condition or critical situation which triggers the vehicle movement dynamics control is described as including an evaluation of whether the answers to the questions of what the driver is doing and what the vehicle is doing yield two different answers. In the Audi reference the questions are directed to the vehicle movement dynamics of steering wherein the first question is "In what direction is the driver steering?" and the second question is "In what direction is the vehicle moving?". In the Lubbers et al. reference the questions are directed to the vehicle movement dynamics of decelerating wherein the first question is "What deceleration rate does the driver demand?" and the second question is "What deceleration rate does the vehicle accomplish?". Examiner, therefore, maintains that the vehicle instability term has been interpreted in light of the specification, particularly, in light of the disclosure in the Audi reference. Accordingly, the rejections have been maintained.

Conclusion

10. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the

grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb 11/25/03
mmb
November 25, 2003

M.C. 11/24/03
MATTHEW C. GRAHAM
PRIMARY EXAMINER
GROUP 310